

# Amphibia, Anura, Leptodactylidae, *Leptodactylus didymus* Heyer, García-Lopez and Cardoso, 1996: Distribution extension and geographic distribution map

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**ABSTRACT:** *Leptodactylus didymus* is a terrestrial frog that inhabits clearings in lowland Amazonian rainforest. Herein we present new Brazilian records of this species for Amazonas and Acre states.

The genus *Leptodactylus* Fitzinger, 1826, includes more than 80 species, being the richest genus of Leptodactylidae (Frost 2010). This genus is separated into four morphological species groups: *fuscus*, *melanonotus*, *ocellatus*, and *pentadactylus*. The *Leptodactylus fuscus* group consists of 26 recognized species distributed throughout South America (de Sá *et al.* 2005). Within this group, the *Leptodactylus mystaceus* complex encloses five currently recognized species: *L. didymus* Heyer, García-Lopez and Cardoso, 1996, *L. elenae* Heyer, 1978, *L. mystaceus* (Spix, 1824), *L. notoaktites* Heyer, 1978 and *L. spixi* Heyer, 1983 (Heyer 1978; de Sá *et al.* 2005).

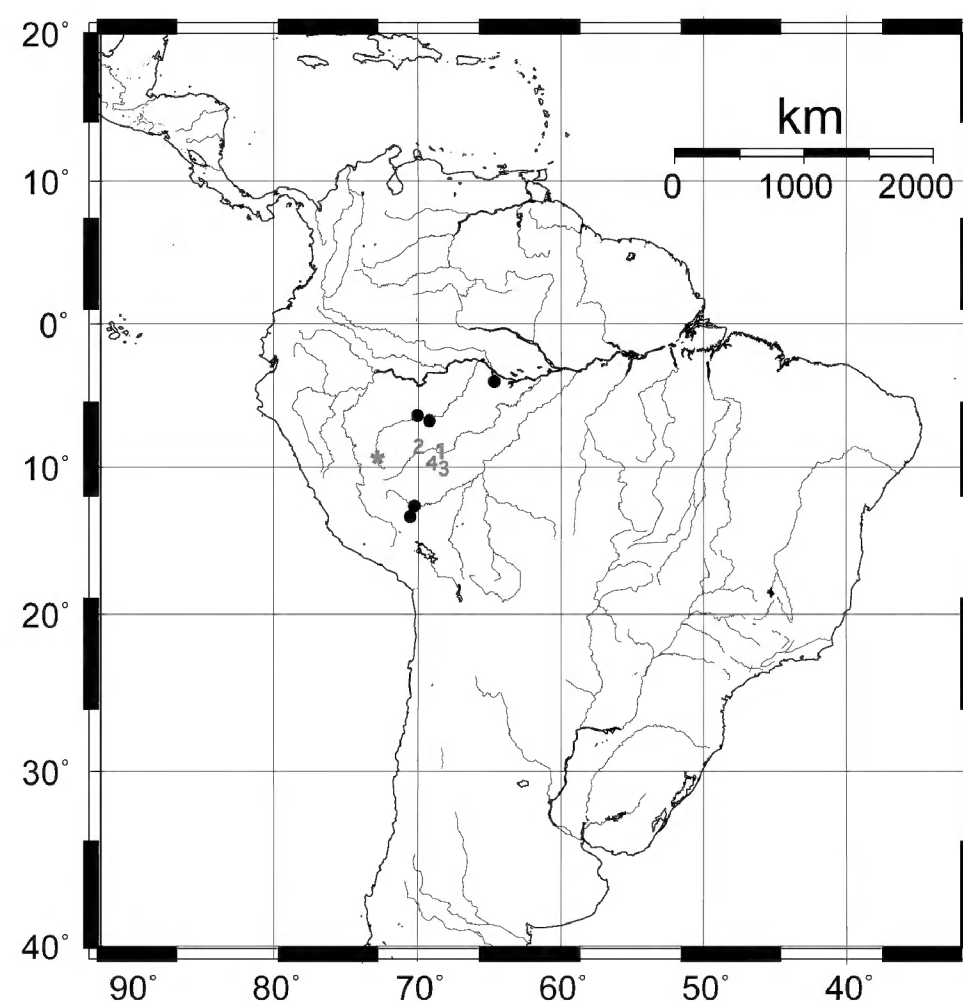
Despite *Leptodactylus didymus* and *L. mystaceus* being morphologically indistinguishable, recognizable only by the characteristics of their advertisement calls, and formerly considered as “sibling species *sensu* Mayr” (Heyer *et al.* 1996), currently the two taxa are not considered sibling species anymore because they do not share a most recent common ancestor (de Sá *et al.* 2005).

*Leptodactylus didymus* was described from the Tambopata Nature Reserve in the Peruvian Amazon Basin, south of the Madre de Dios River (Heyer *et al.* 1996). At present, the species is distributed throughout the western Amazon Basin in far western Brazil, southeastern Peru, and extreme northern Bolivia (De la Riva *et al.* 2000; Frost 2009). Moreover, *L. didymus* is a terrestrial species that inhabits clearings in lowland primary and secondary tropical rainforest, but it can also be found in urban areas and other disturbed habitats (Frost 2010). The species lays eggs in foam nests and the larvae are flooded into temporary ponds (Angulo *et al.* 2004).

Herein, we present new records from Brazil for *L. didymus* extending its distribution range approximately 500 km from the type locality “Peru: Madre de Dios: Tambopata nature reserve: 12°50’ S, 69°17’ W (Frost 2009). The species was found in the state of Amazonas state, Boca do Acre municipality (on 7 January 2008 - 09°01’ S, 67°14’ W), and in the state of Acre, municipalities

of Feijó (08°09’ S, 70°21’ W), Senador Guiomar (10°04’ S, 67°37’ W) and Rio Branco (10°02’ S, 67°47’ W; 09°57’ S, 67°51’ W) (Figure 1).

During survey studies in Amazonian localities, some males of *L. didymus* were found vocalizing in holes dug in the forest floor (Figure 2) and in disturbed open patches. Vocalizations were digitally recorded in most areas where *L. didymus* were calling, and the individuals were photographed. Voucher specimens were collected and housed in the Coleção Herpetológica da Universidade Federal do Acre (UFAC 4423, 4424 and 4425) and Coleção Herpetológica da Universidade de Brasília (CHUNB 59432) (collection permit IBAMA 0200100058/07-01).



**FIGURE 1.** Geographic distribution of *Leptodactylus didymus* in South America. Black dots are literature records, red star is the type locality and red numbers are the new records: 1) Boca do Acre, Amazonas; 2) Feijó, Acre; 3) Senador Guiomar, Acre; 4) Rio Branco, Acre.



**FIGURE 2.** *Leptodactylus didymus* found vocalizing in a hole dug in primary forest floor next to the Juruparí River, Feijó Municipality, Acre, Brazil (Photo by N. M. Venâncio).

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#### LITERATURE CITED

- Angulo, A., S. Reichle and I. de la Riva. 2004. *Leptodactylus didymus*. *Red List of Threatened Species. Version 2010.1*. Electronic Database accessible at <http://www.iucnredlist.org>. IUCN. Captured on 20 March 2010.
- De la Riva, I., J. Köhler, S. Lötters and S. Reichle. 2000. Ten years of research on Bolivian amphibians: updated checklist, distribution, taxonomic problems, literature and iconography. *Revista Española de Herpetología* 14(1): 19-164.
- De Sá, R.O., W.R. Heyer and A. Camargo. 2005. Are *Leptodactylus didymus* and *L. mystaceus* Phylogenetically Sibling Species (Amphibia, Anura, Leptodactylidae)? *Herpetologica Petropolitana* 12: 90-92.
- Frost, D.R. 2010: *Amphibian Species of the World: an Online Reference. Version 5.4 (8 April, 2010)*. Electronic Database accessible at <http://research.amnh.org/herpetology/amphibia/> American Museum of Natural History, New York, USA. Captured on: 30 September 2010.
- Heyer, W.R. 1978. Systematics of the *fuscus* group of the genus *Leptodactylus* (Amphibia, Leptodactylidae). *Natural History Museum of Los Angeles County Science Bulletin* 29(1): 1-85.
- Heyer, W.R., J.M. García-Lopez and A.J. Cardoso. 1996. Advertisement call variation in the *Leptodactylus mystaceus* species complex (Amphibia: Leptodactylidae) with a description of a new sibling species. *Amphibia-Reptilia* 17(1): 7-31.

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